

WHAT IS CLAIMED IS:

1. A process for repairing at least one crack in a metal workpiece comprising the steps of:

forming a braze paste containing a first nickel base alloy material containing boron and chromium and a second nickel base alloy material containing chromium and cobalt;

applying said brazing paste to an area of said metal workpiece containing said at least one crack; and

subjecting said brazing paste and said workpiece to a brazing cycle by heating said brazing paste and said workpiece.

2. A process according to claim 1, wherein said heating step comprises heating said brazing paste and said workpiece to a temperature in the range of 2000 degrees Fahrenheit to 2200 degrees Fahrenheit.

3. A process according to claim 1, wherein said braze paste forming step providing said first and second nickel base alloy materials in powder form and mechanically mixing said first and second nickel base alloy materials.

4. A process according to claim 1, further comprising prefilling said at least one crack with said second nickel base alloy material.

5. A process according to claim 1, wherein said braze paste forming step comprises forming a paste containing from 20 wt% to 60 wt% of the first nickel base alloy material and the balance comprising said second nickel base alloy material.

6. A process according to claim 5, wherein said braze paste forming step comprises forming a braze paste with a 1:1 ratio of said first nickel base alloy material to said second nickel base alloy material.
7. A process according to claim 1, wherein said braze paste forming step comprises mixing a first nickel base alloy material containing nickel as a major constituent and from 14 wt% to 16 wt% chromium and from 2.4 wt% to 3.0 wt% boron and a second nickel base alloy material containing from 45 wt% nickel to 51 wt% nickel, from 22 wt% to 23 wt% chromium, and from 18.5 wt% to 19.5 wt% cobalt.
8. A brazing paste for repairing cracks in a metal workpiece, said paste comprising a first nickel base alloy material containing boron and chromium and a second nickel base alloy material containing chromium and cobalt.
9. A brazing paste according to claim 8, wherein said paste contains from 20 wt% to 60 wt% of the first nickel base alloy material and the balance comprising said second nickel base alloy material.
10. A brazing paste according to claim 9, wherein said first nickel base alloy material and said second nickel base alloy material are present in a 1:1 ratio.
11. A brazing paste according to claim 8, wherein said first nickel base alloy material contains nickel as a major constituent and from 14 wt% to 16 wt% chromium and from 2.4 wt% to 3.0 wt% boron.
12. A brazing paste according to claim 8, wherein said second nickel base alloy material contains from 45 wt% nickel to 51 wt%

nickel, from 22 wt% to 23 wt% chromium, and from 18.5 wt% to 19.5 wt% cobalt.

13. A process for repairing at least one crack in a turbine engine component comprising the steps of:

forming a braze paste containing a first nickel base alloy material containing boron and chromium and a second nickel base alloy material containing chromium and cobalt;

applying said brazing paste to an area of said turbine engine component containing said at least one crack; and

heating said brazing paste and said turbine engine component to cause said braze paste to flow into and fill said at least one crack.

14. A process according to claim 13, wherein said heating step comprises heating said brazing paste and said turbine engine component to a temperature in the range of from 2000 degrees Fahrenheit to 2200 degrees Fahrenheit.

15. A process according to claim 13, wherein said braze paste forming step providing said first and second nickel base alloy materials in powder form and mechanically mixing said first and second nickel base alloy materials.

16. A process according to claim 13, further comprising prefilling said at least one crack in said turbine engine component with said second nickel base alloy material.

17. A process according to claim 13, wherein said braze paste forming step comprises forming a paste containing from 20 wt% to

60 wt% of the first nickel base alloy material and the balance comprising said second nickel base alloy material.

18. A process according to claim 17, wherein said braze paste forming step comprises forming a braze paste with a 1:1 ratio of said first nickel base alloy material to said second nickel base alloy material.

19. A process according to claim 13, wherein said braze paste forming step comprises mixing a first nickel base alloy material containing nickel as a major constituent and from 14 wt% to 16 wt% chromium and from 2.4 wt% to 3.0 wt% boron and a second nickel base alloy material containing from 45 wt% nickel to 51 wt% nickel, from 22 wt% to 23 wt% chromium, and from 18.5 wt% to 19.5 wt% cobalt.